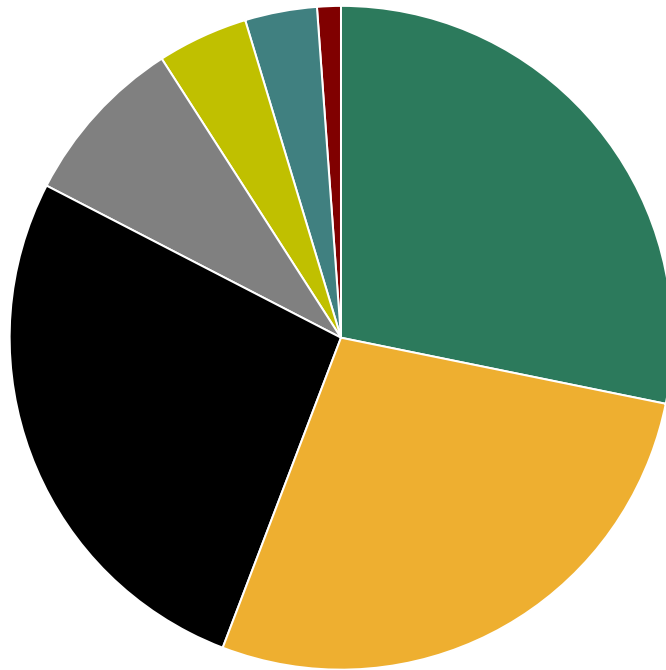
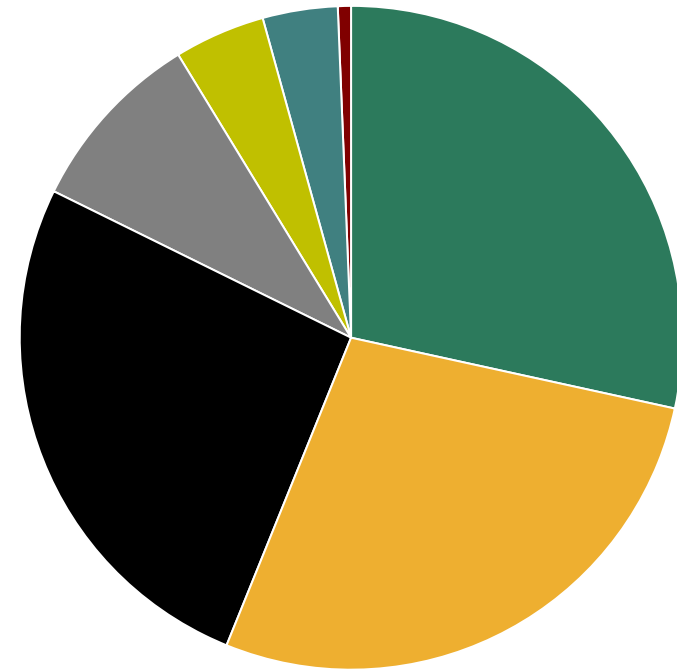


March 31, 2019 : \$2,305,675,782

June 30, 2019 : \$2,335,789,191

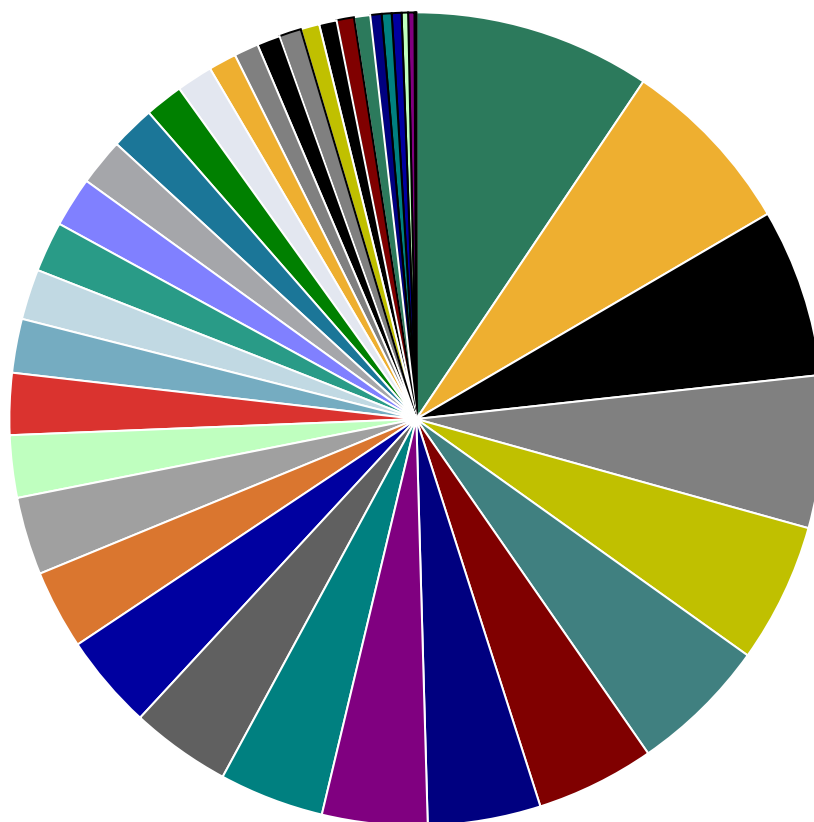


	Market Value (\$)	Allocation (%)
Fixed Income Composite	649,996,563	28.19
Domestic Equity Composite	636,859,890	27.62
International Equity Composite	617,165,744	26.77
Total Real Estate Composite	191,770,144	8.32
Hedge Fund Composite	102,159,697	4.43
Private Equity Composite	80,969,478	3.51
In House Cash	26,754,266	1.16



	Market Value (\$)	Allocation (%)
Fixed Income Composite	663,877,104	28.42
Domestic Equity Composite	647,264,316	27.71
International Equity Composite	610,716,417	26.15
Total Real Estate Composite	209,728,099	8.98
Hedge Fund Composite	103,652,335	4.44
Private Equity Composite	85,506,146	3.66
In House Cash	15,044,773	0.64

June 30, 2019 : \$2,335,789,191



	Market Value (\$)	Allocation (%)
Brandywine	219,968,773	9.42
Rhumbline S&P 500	167,326,890	7.16
Mackay Shields	156,149,205	6.69
Barrow, Hanley	141,500,540	6.06
1607 Capital Partners	129,469,536	5.54
Marathon Asset Mgmt	128,223,758	5.49
J.P. Morgan Global Emerging Markets Discovery Fund	110,167,412	4.72
Acadian EM Equity II	104,685,836	4.48
Prudential Core Conserv Bond	97,557,038	4.18
PIMCO	97,223,719	4.16
Smith Graham	92,978,369	3.98
Principal Global Investors	88,072,450	3.77
Winslow Capital Management	73,577,775	3.15
BlackRock US Core Property Fund	72,341,834	3.10
Rhumbline Russell 1000 Growth	57,859,023	2.48
NTGI S&P 400	57,214,503	2.45
Strategic Global Advisors	50,097,425	2.14
Aetos	46,880,194	2.01
Conestoga Capital Advisors	46,689,998	2.00
Grosvenor Institutional Partners, L.P.	46,379,781	1.99
Capital Prospects SMID	43,580,922	1.87
NB Crossroads Fund XXI	41,096,204	1.76
Pantheon Global Secondary Fund V	35,399,968	1.52
Nicholas Investment Partners	33,595,898	1.44
Capital Prospects Small Cap Value	25,918,767	1.11
Gerding Edlen Green Cities III, L.P.	22,732,958	0.97
TA Realty Fund XI	21,598,126	0.92
TA Realty Core Property Fund	20,422,144	0.87
Long Wharf RE Partners V, L.P.	17,324,467	0.74
RREEF REIT II	16,351,916	0.70
Vanguard REIT Index Inv	16,045,304	0.69
In House Cash	15,044,773	0.64
Preserver, L.P.	10,392,360	0.44
Mesirow Real Estate Value Fund III, L.P.	9,318,062	0.40
SSM Partners Growth Equity II L.P.	9,009,974	0.39
Cornerstone (Barings) Real Estate Advisers Fund X	6,020,572	0.26
Long Wharf Real Estate Partners IV, L.P.	5,867,059	0.25
Long Wharf RE Partners VI, L.P.	1,214,859	0.05
Gerding Edlen Green Cities IV, L.P.	486,584	0.02
Cornerstone (Barings) Real Estate Advisers VIII	4,214	0.00

City of Memphis

Asset Allocation Comparison

Portfolio Value 6/30/19

\$2,335,789,191

Target Allocations

Equity

		(000)
Large Cap Equity	17.00%	\$397,084

Mid/SMID Cap Equity	5.00%	\$116,789
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Small Cap Equity	5.00%	\$116,789
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Domestic Equity	27.00%	\$630,663
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Developed International	18.50%	\$432,121
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Emerging Markets	8.50%	\$198,542
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International	27.00%	\$630,663
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Equity Total	54.00%	\$1,261,326
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Fixed Income

Core Fixed Income	12.00%	\$280,295
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Global Fixed Income	10.00%	\$233,579
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Global High Yield	6.00%	\$140,147
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Fixed Income Total	28.00%	\$654,021
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Current Managers & Allocations

		(000)
Barrow, Hanley (large cap value)	6.06%	\$141,501
Rhumblin Russell 1000 Growth (large cap growth)	2.48%	\$57,859
Winslow (large cap growth)	3.15%	\$73,578
Rhumblin S&P 500 (large cap core)	7.16%	\$167,327

Northern Trust (mid cap core)	2.45%	\$57,215
Capital Prospects SMID Cap*	1.87%	\$43,581

Capital Prospects Small Cap Value*	1.11%	\$25,919
Conestoga (small cap growth)	2.00%	\$46,690
Nicholas (small cap growth)	1.44%	\$33,596

Domestic Equity	27.71%	\$647,264
------------------------	---------------	------------------

1607 Capital Partners	5.54%	\$129,470
Principal Global Investors	3.77%	\$88,072
Marathon Asset Mgmt	5.49%	\$128,224
Strategic Global Advisors	2.14%	\$50,097

Acadian	4.48%	\$104,686
JPMorgan	4.72%	\$110,167

International	26.15%	\$610,716
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Equity Total	53.86%	\$1,257,981
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PIMCO	4.16%	\$97,224
Prudential Core Conserv Bond	4.18%	\$97,557
Smith Graham	3.98%	\$92,978

Brandywine	9.42%	\$219,969
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Mackay Shields	6.69%	\$156,149
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Fixed Income Total	28.42%	\$663,877
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Difference

1.85%

-0.68%

-0.45%

0.71%

-1.55%

0.70%

-0.85%

-0.14%

0.32%

-0.58%

0.69%

0.42%

Range

13%-21%

0%-7%

0%-7%

17%-37%

14%-23%

5%-12%

17%-37%

20%-36%

Real Estate

Core/Value Add/REITs	10.00%	\$233,579	BlackRock US Core Property Fund	3.10%	\$72,342	
			RREEF REIT II	0.70%	\$16,352	
			Vanguard REIT Index	0.69%	\$16,045	
			TA Realty Core Property Fund	0.87%	\$20,422	
			Long Wharf Real Estate Partners IV	0.25%	\$5,867	(Total Commitment \$20M, Total Drawn \$21.5M, Total Distributed \$24.9M)
			Long Wharf Real Estate Partners Fund V	0.74%	\$17,324	(Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$6.4M)
			Long Wharf Real Estate Partners Fund VI	0.05%	\$1,215	(Total Commitment \$20M, Total Drawn \$1.4M, Total Distributed \$0.0M)
			Cornerstone (Barings) Real Estate Fund VIII ¹	0.00%	\$4	(Total Commitment \$10M, Total Drawn \$11.7M, Total Distributed \$15.6M)
			Cornerstone (Barings) Real Estate Fund X ¹	0.26%	\$6,021	(Total Commitment \$10M, Total Drawn \$7.9M, Total Distributed \$3.8M)
			Gerding Edlen Green Cities III	0.97%	\$22,733	(Total Commitment \$20M, Total Drawn \$23.2M, Total Distributed \$5.0M)
			Gerding Edlen Green Cities IV	0.02%	\$487	(Total Commitment \$20M, Total Drawn \$0.6M, Total Distributed \$0.0M)
			TA Realty Fund XI	0.92%	\$21,598	(Total Commitment \$20M, Total Drawn \$20.0M, Total Distributed \$2.3M)
			Mesirow Financial Real Estate Value Fund III	0.40%	\$9,318	(Total Commitment \$20M, Total Drawn \$10.2M, Total Distributed \$1.1M)

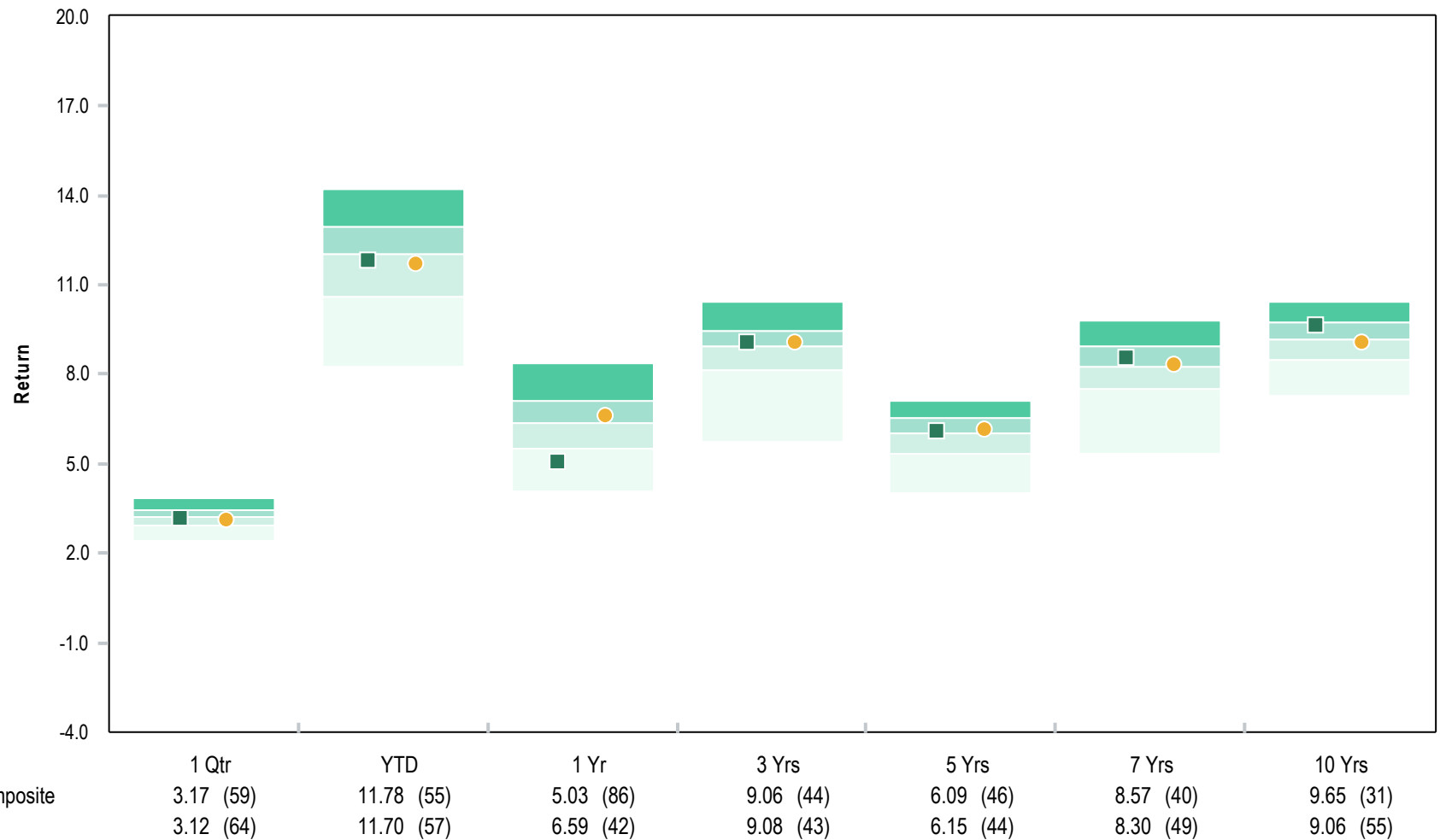
Dune Real Estate Partners Fund III (\$30M Commitment)

Real Estate Total	10.00%	\$233,579	Real Estate Total	8.98%	\$209,728	-1.02%	5%-10%
Private Equity							
Secondary	2.00%		Pantheon Global Secondary Fund V	1.52%	\$35,400	(Total Commitment \$50M, Total Drawn \$33.7M, Total Distributed \$10.4M)	
Direct Private Equity			SSM Growth Equity Fund II*	0.39%	\$9,010	(Total Commitment \$10M, Total Drawn \$7.4, Total Distributed \$0.0M)	
Diversified FoF	2.00%		Neuberger Berman Crossroads XXI	1.76%	\$41,096	(Total Commitment \$50M, Total Drawn \$33.5M, Total Distributed \$0.0M)	
Private Equity Total	4.00%	\$93,432		3.66%	\$85,506	-0.34%	2%-6%
Hedge Fund of Funds							
	4.00%		Actos	2.01%	\$46,880		
			Grosvenor	1.99%	\$46,380		
			Preserver, LP*	0.44%	\$10,392		
Hedge Fund of Funds Total	4.00%	\$93,432		4.44%	\$103,652	0.44%	2%-6%
Internal Account	0.00%	\$0	Internal Account	0.64%	\$15,045		
Cash	0.00%	\$0	Cash	0.64%	\$15,045	0.64%	0%-5%
Total	100%	\$2,335,789	Total	100%	\$2,335,789		

¹ Cornerstone Real Estate Advisers now operates under the investment adviser name "Barings Real Estate Advisers," however; all predecessor funds retain the name Cornerstone. All new products open to new investors will operate under the name "Barings Real Estate Advisers" moving forward.

	Performance (%)								Inception Date
	1 Quarter	Year To Date	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	
Total Fund Composite	3.17	11.78	5.03	9.06	6.09	8.57	9.65	9.47	10/01/1982
<i>Policy Index</i>	3.12	11.70	6.59	9.08	6.15	8.30	9.06	9.92	
In House Cash	0.56	1.18	2.33	1.31	0.87	0.66	0.58	4.14	10/01/1982
<i>90 Day U.S. Treasury Bill</i>	0.64	1.24	2.31	1.37	0.85	0.63	0.47	3.88	
Domestic Equity Composite	4.35	19.37	6.91	14.40	9.07	13.01	14.22	11.88	10/01/1982
<i>Russell 3000 Index</i>	4.10	18.71	8.98	14.02	10.19	13.79	14.67	11.67	
Fixed Income Composite	2.97	6.79	6.62	3.78	3.61	3.69	5.60	7.50	10/01/1982
<i>Fixed Income Index</i>	3.06	6.73	7.03	3.28	3.15	3.39	4.41	7.42	
International Equity Composite	3.06	14.77	0.83	10.79	4.34	8.85	8.63	5.26	01/01/1990
<i>International Equity Index</i>	2.73	12.97	1.17	9.58	2.46	6.73	6.97	5.10	
Hedge Fund Composite	1.46	5.02	1.13	4.84	N/A	N/A	N/A	5.02	04/01/2016
<i>90-Day T-Bill+ 5%</i>	1.87	3.74	7.43	6.44	5.89	5.66	5.49	6.34	
<i>HFN HFOF Multi Strategy</i>	1.39	5.10	0.31	3.86	1.62	3.26	2.80	3.67	
Core Private Real Estate Composite	1.62	5.96	7.49	6.79	9.58	10.02	10.96	8.38	09/01/1999
<i>NCREIF Property Index</i>	1.51	3.34	6.51	6.89	8.83	9.43	9.25	8.87	

	Performance (%)									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Total Fund Composite	-5.39	18.36	6.76	0.24	5.49	17.71	13.75	0.72	14.05	22.23
Policy Index	-4.45	16.72	8.00	-0.19	5.86	15.19	12.79	0.77	12.11	19.76
In House Cash	1.93	0.67	0.35	0.18	0.11	0.11	0.20	0.54	0.36	0.34
90 Day U.S. Treasury Bill	1.87	0.86	0.25	0.03	0.04	0.05	0.08	0.08	0.13	0.17
Domestic Equity Composite	-5.88	22.62	10.04	-1.26	8.80	35.55	16.30	0.65	18.23	28.67
Russell 3000 Index	-5.24	21.13	12.74	0.48	12.56	33.55	16.42	1.03	16.93	28.34
Fixed Income Composite	-0.98	6.94	5.14	-0.23	4.70	0.13	8.15	6.69	8.81	18.96
Fixed Income Index	-0.89	5.65	4.83	-0.86	4.89	0.39	6.87	6.39	6.54	5.93
International Equity Composite	-15.52	33.29	3.30	-0.50	-1.08	20.79	20.28	-12.77	13.91	36.19
International Equity Index	-13.99	28.77	3.16	-4.06	-4.13	16.58	17.70	-13.18	11.60	42.14
Hedge Fund Composite	-1.55	6.72	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
90-Day T-Bill+ 5%	6.97	5.90	5.27	5.03	5.04	5.05	5.08	5.09	5.14	5.17
HFN HFOF Multi Strategy	-3.58	7.26	0.16	-1.26	3.02	9.09	4.80	-5.56	4.78	9.73
Core Private Real Estate Composite	4.91	7.75	8.50	11.92	20.06	7.12	14.60	13.01	22.87	-27.15
NCREIF Property Index	6.72	6.96	7.97	13.33	11.82	10.98	10.54	14.26	13.11	-16.85



5th Percentile	3.86	14.24	8.37	10.41	7.10	9.79	10.45
1st Quartile	3.47	12.95	7.14	9.45	6.52	8.93	9.76
Median	3.24	12.04	6.36	8.96	6.00	8.24	9.20
3rd Quartile	2.96	10.62	5.50	8.14	5.33	7.53	8.50
95th Percentile	2.43	8.25	4.08	5.71	4.02	5.32	7.29

Parentheses contain percentile rankings.
Calculation based on quarterly periodicity.